



Figure S2. Microtubule-activated steady state ATPase rates for wildtype and chimeric motors. ATPase rates ($ADP \text{ motor}^{-1} s^{-1}$) of 50 nM each motor are plotted against 0-6 μM microtubules. Data are averages of several motor domain preps tested in triplicate. HsEg5 rates are shown in the inset. Vertical dashed lines mark the K_m of each trace. Error bars show standard errors for each data point. The Wilcoxon signed rank test confirmed that the wildtype motor and the chimera datasets are significantly different ($\alpha=0.05$). However, the two chimera datasets are statistically similar.